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Co-ordinated Program Strategy for the Ministry of Natural Resources in Southern Ontario

7

January, 1981

FOR DISCUSSION

Strategic Land Use Planning Program



Ministry of
Natural
Resources

Hon. James A. C. Auld
Minister
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Deputy Minister

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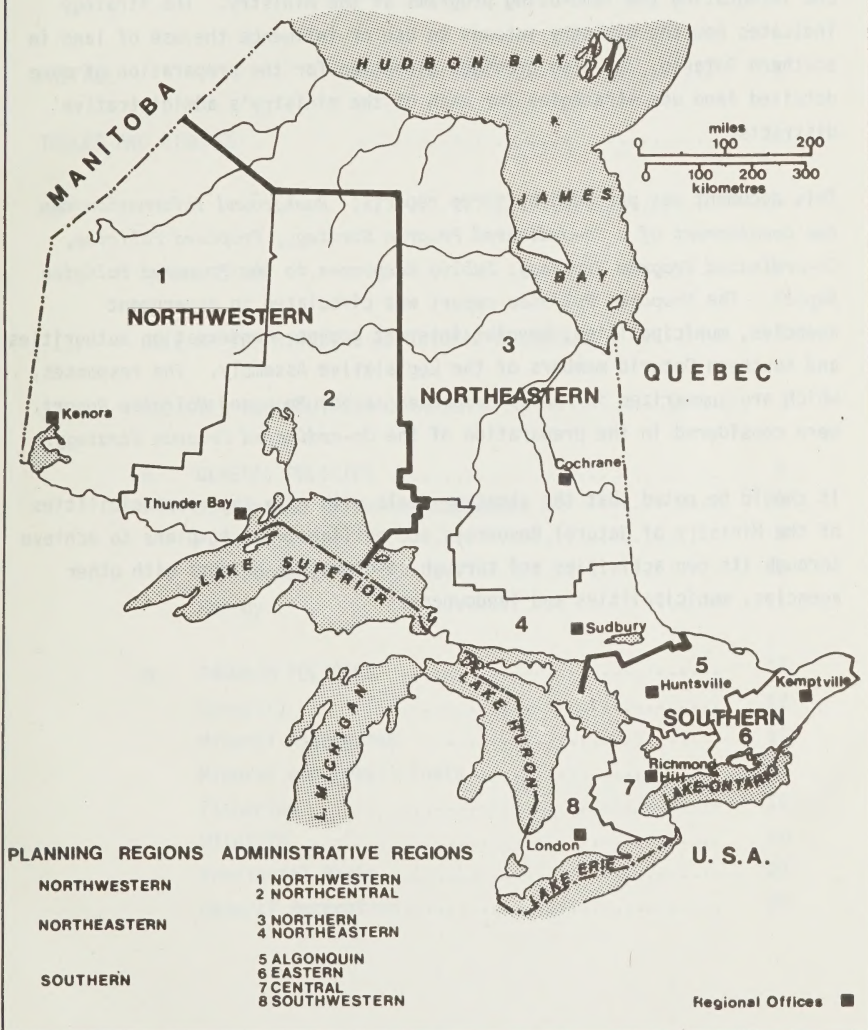
CO-ORDINATED PROGRAM STRATEGY
FOR THE
MINISTRY OF NATURAL RESOURCES
IN SOUTHERN ONTARIO

JANUARY, 1981



STRATEGIC LAND USE PLANNING PROGRAM

MINISTRY OF NATURAL RESOURCES
PLANNING REGIONS
AND
ADMINISTRATIVE REGIONS



PREFACE

The *Co-ordinated Program Strategy* states what the Ministry of Natural Resources plans to achieve in southern Ontario. It identifies objectives, targets and implementation strategies and is the basis for co-ordinating and integrating the land-using programs of the ministry. The strategy indicates how the ministry intends to use or influence the use of land in southern Ontario. It also provides direction for the preparation of more detailed land use strategies for each of the ministry's administrative districts.

This document was preceded by three reports: *Background Information to the Development of a Co-ordinated Program Strategy*; *Proposed Policies, Co-ordinated Program Strategy*; *Public Responses to the Proposed Policies Report*. The *Proposed Policies* report was circulated to government agencies, municipalities, special interest groups, conservation authorities and southern Ontario members of the Legislative Assembly. The responses, which are summarized in *Public Responses to the Proposed Policies Report*, were considered in the preparation of the *Co-ordinated Program Strategy*.

It should be noted that the strategy deals with only the responsibilities of the Ministry of Natural Resources and outlines what it plans to achieve through its own activities and through co-operative efforts with other agencies, municipalities and landowners.

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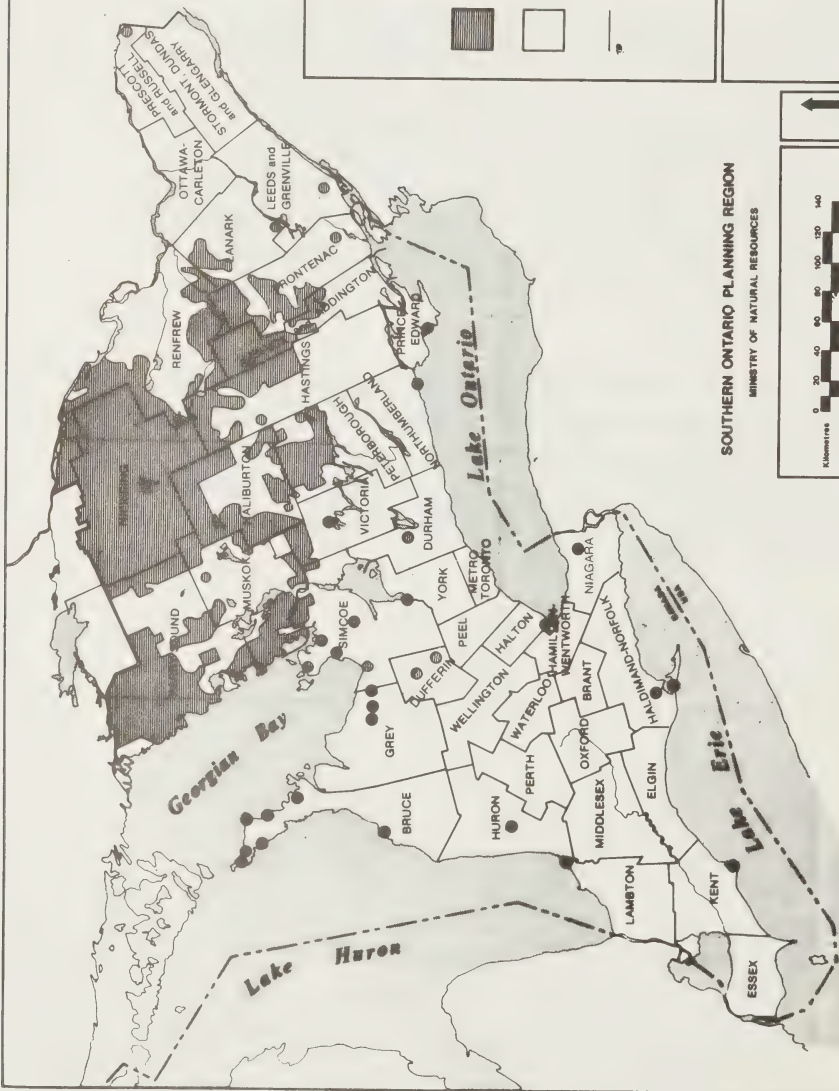
I. INTRODUCTION

Southern Ontario comprises only 17 percent of the total area of the province but provides about 80 percent of all outdoor recreation, 90 percent of the mineral aggregate extracted and 20 percent of the timber harvested. Clearly southern Ontario is important in achieving the objectives of the Ministry of Natural Resources.

The strategy is based on future demand and resource capability. It recognizes the responsibilities of municipalities and other agencies.

The target dates for programs vary from the year 1999 to 2025. All targets assume annual rates of growth of two percent or less. Such rates of growth are consistent with recent southern Ontario population projections and with current demand forecasts. It is important to note that demand for natural resources will not cease in 1999 or 2025. The strategy, therefore, ensures the availability of natural resources beyond the target dates.

Ministry targets in southern Ontario must be achieved primarily on private land in organized municipalities (map 1). This circumstance influences the manner in which the ministry must prepare its plans and achieve its objectives. For example, the ministry must emphasize extension programs, technical assistance and other forms of encouragement to private landowners.



Provincial lands over 500 hectares managed by Ministry of Natural Resources

Predominantly private land

Municipal boundary

LAND OWNERSHIP AND MAJOR MUNICIPALITIES

SOUTHERN ONTARIO PLANNING REGION
MINISTRY OF NATURAL RESOURCES



II. ROLE OF THE MINISTRY OF NATURAL RESOURCES

The goal of the ministry is:

to provide opportunities for resource development and outdoor recreation for the continuous economic and social benefit of the people of Ontario and to manage, protect, and conserve public lands and waters.

The ministry is concerned with managing and encouraging the use of natural resources to provide a contribution to the economy of Ontario. This contribution will be in jobs provided and dollars generated by resource products and recreation industries.

The ministry has programs to ensure the availability of both renewable and non-renewable resources. It regulates the use of these resources for the long-term benefit of the people of Ontario.

The ministry recognizes that outdoor recreation is important for tourism and social well-being. It also recognizes that physical, biological, cultural and historical resources are important elements in the environment and that representative and unique components should be protected.

The ministry has two roles in land management: the first is a custodial role to protect the capability and quality of public land and water; the second is to participate in the planning and control of the total land area.

The broad objectives of the ministry are:

to provide for an optimum continuous contribution to the economy of Ontario by stimulating and regulating the utilization of available supplies of fish, fur-bearers, minerals and trees by resource products industries;

to provide from public lands and waters and to encourage on other lands and waters;

- a wide variety of outdoor recreational opportunities accessible to, and for the continuous benefit of, the people of Ontario;*

- *the identification and conservation of unique or representative physical, biological, cultural and historical features of the province, and*
- *a continuous contribution to the economy of Ontario from tourism and its related industries;*

to administer, protect and conserve public lands and waters and to ensure, with other agencies, through participation in planning and control, co-ordinated uses of all lands and waters.

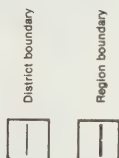
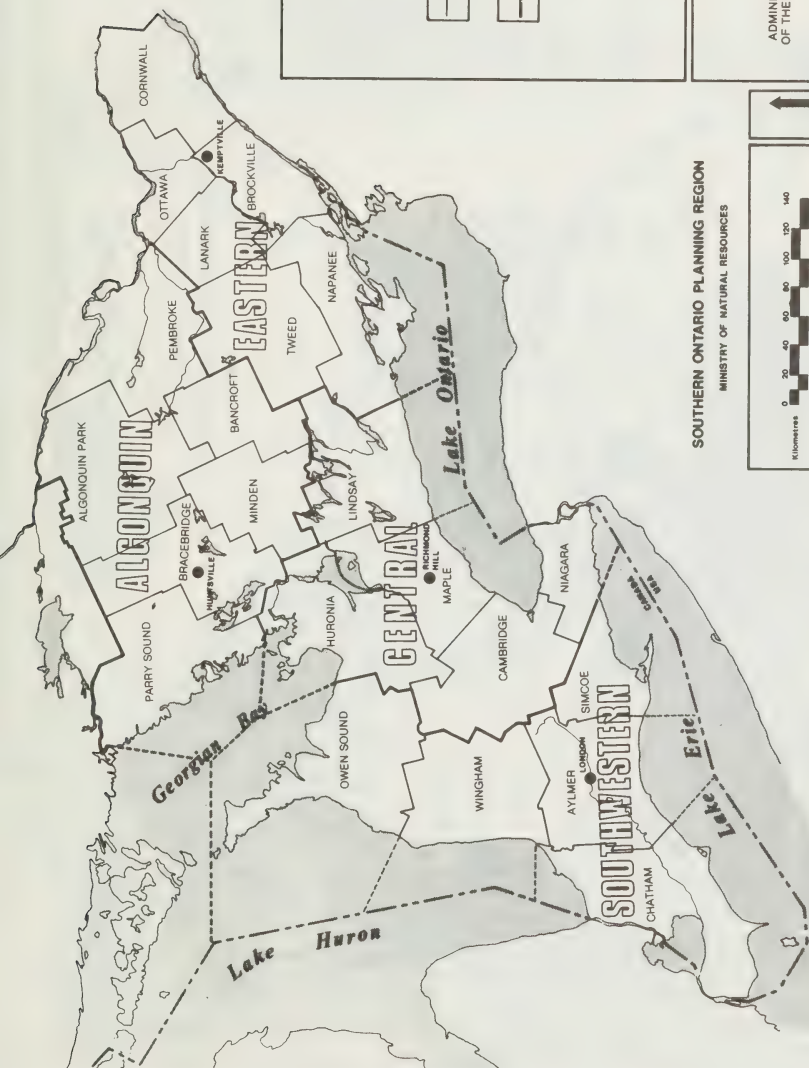
Specific objectives and targets for resource production and outdoor recreation are identified. They have not been developed for land and water management since these activities are carried out to assist in the achievement of other ministry and government objectives. Guidance for land and water activities is provided in the strategies section of the report.

Objectives are achieved in southern Ontario through 4 administrative regions and 22 administrative districts (map 2). The programs of conservation authorities and parks commissions also contribute to the achievement of these objectives.

Conservation authorities are a form of provincial-municipal partnership established under the provisions of *The Conservation Authorities Act*. Mutual benefits are derived from this association since both provincial and local objectives are achieved.

There are 35 authorities in southern Ontario (map 3) covering most of the land south of the Precambrian Shield. Resource management activities such as floodplain management, flood damage reduction, erosion control, water conservation and forest management are undertaken. Outdoor recreation opportunities such as swimming, boating, camping, angling, hunting and wildlife viewing are also provided.

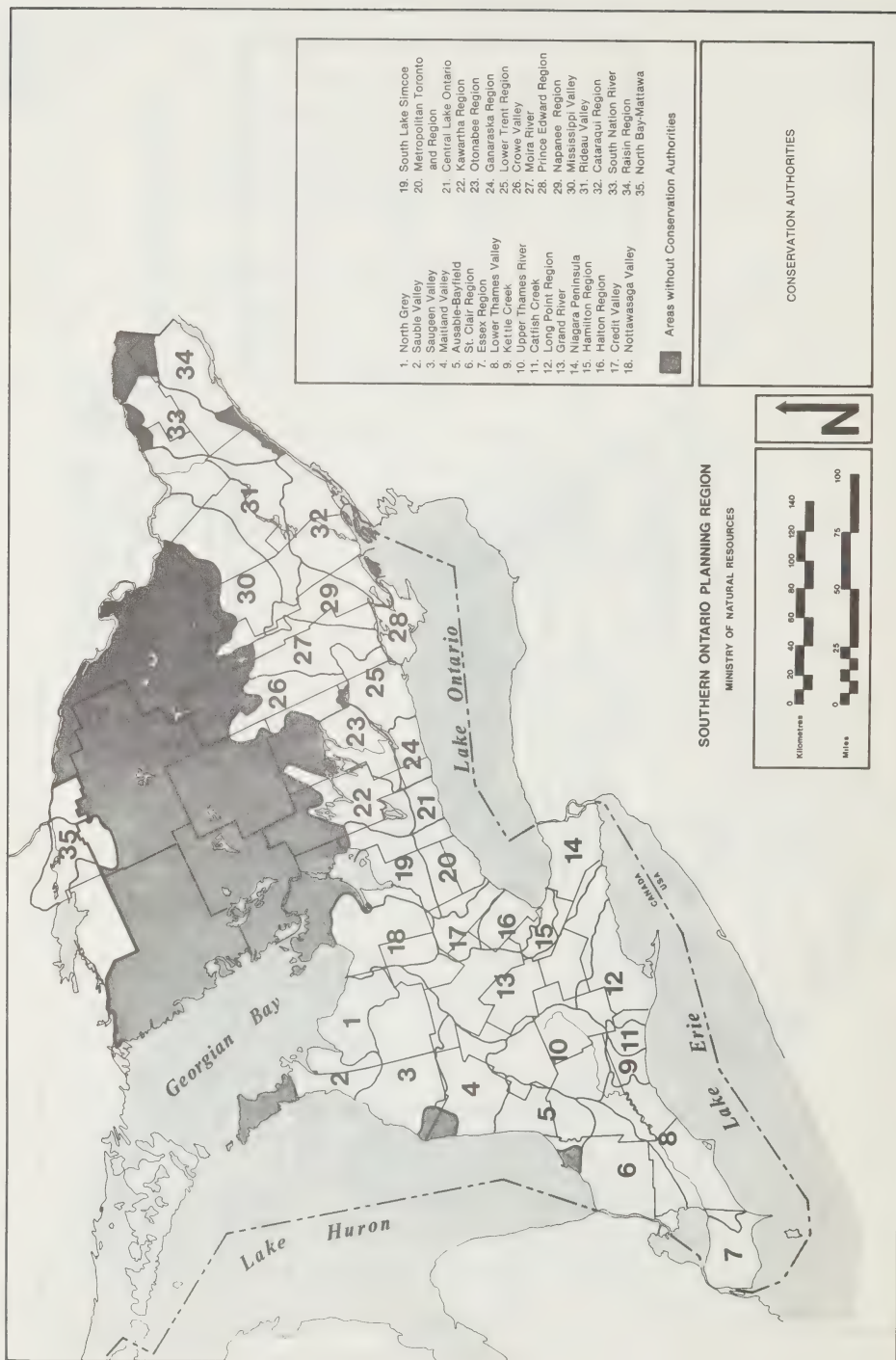
Parks commissions (map 4) are independent agencies reporting to the Minister of Natural Resources. Each commission is governed by a separate Act and directed by a board of commissioners. The St. Lawrence, Niagara,



SOUTHERN ONTARIO PLANNING REGION
MINISTRY OF NATURAL RESOURCES



ADMINISTRATIVE REGIONS AND DISTRICTS
OF THE MINISTRY OF NATURAL RESOURCES





- A St. Clair Parkway Commission
- B The Niagara Parks Commission
- C The St. Lawrence Parks Commission



Algonquin Forestry Authority



Canada-Ontario-Rideau-Trent-Severn Secretariat



Niagara Escarpment Commission (reports to Cabinet Committee on Resources Development)



North Georgian Bay Recreation Reserve

AGENCIES ASSOCIATED WITH THE
MINISTRY OF NATURAL RESOURCES



Kilometres



Miles



SOUTHERN ONTARIO PLANNING REGION
MINISTRY OF NATURAL RESOURCES

and St. Clair Parks Commissions contribute to the achievement of the recreation, protection, heritage appreciation and tourism objectives of the ministry.

There are several other provincial agencies with which the ministry will work closely. These include other ministries such as Agriculture and Food, Environment, Housing, Industry and Tourism, and special agencies such as the Algonquin Forestry Authority, the Niagara Escarpment Commission and the Canada Ontario Rideau Trent Severn (CORTS) Secretariat. The ministry must also consider special planning areas such as the North Georgian Bay Recreation Reserve. In addition, the ministry has a working liaison with a wide variety of client groups and interested citizens.

III. POLICIES FOR SOUTHERN ONTARIO

A. GENERAL POLICIES

Integrated Resource Management

Programs will be integrated to ensure the efficient use of land and water to achieve ministry objectives.

The area of land and water in southern Ontario suitable and available for the achievement of ministry objectives is limited, and as a result, many activities must be carried out on the same area. Exclusive use of large areas for a single purpose is generally not possible, although in selected instances it may be necessary.

To be effective and efficient the ministry must integrate its land-using activities and will:

- . normally undertake two or more compatible activities on the same major area;
- . encourage sequential use;
- . recognize that, in some circumstances, management of areas for a single purpose such as extraction, protection or recreation is necessary;
- . ensure that each program contributes, to the extent possible, to the achievement of other program objectives.

In this report a direction is provided for integrated management. Analysis suggests that all objectives outlined are achievable by adhering to this direction.

Public Safety

The ministry will seek to eliminate loss of life and to minimize property damage and community disruption resulting from floods, erosion, earth slippage and forest fires.

The ministry will also seek to eliminate injury and loss of life from hazards around abandoned pits, quarries and mine shafts.

The first objective is met by the ministry in co-operation with conservation authorities and municipalities through efforts in stream flow forecasting, contingency planning, emergency response, watershed conservation, forest protection and through input to floodplain regulations and municipal plans and by-laws.

For erosion susceptible sites, 100 years of protection is the provincial standard. The regulatory flood for designation of floodplains in Ontario is defined as the regional flood or the 100-year flood, whichever is greater. Conservation authorities have, where possible, adopted detailed programs, policies and operational criteria to apply more precisely the provincial standards to local conditions.

Owing to intensive development and high property and resource values, the potential damage from forest fires in southern Ontario is significant, although the extent of fires is usually small. The area of ministry fire control activity corresponds with the area of extensive forest cover.

The second objective is met in conjunction with the Ministry of Labour through field inspection of abandoned pits, quarries and mine shafts and through appropriate follow-up action.

Environment

The ministry will conduct its activities in an environmentally responsible manner.

The Ministry of Natural Resources is only one of several agencies which have legislated responsibility to maintain an acceptable environmental quality for the people of Ontario, thus, overlapping responsibilities occur. Planning is therefore required to co-ordinate the specific activities of the various agencies involved. Achievement of ministry targets is contingent on a satisfactory environment being maintained. For example, achievement of the stated fisheries targets may be adversely affected by acid rain.

All resource management activities carried out by the ministry are subject to *The Environmental Assessment Act*. All programs of the ministry share in the responsible management of natural resources. Biologically sound management is a precept of forest, wildlife and fish management. The management of mineral aggregates includes both protection from incompatible activities and discouragement of the use of high quality materials where lower quality materials would be suitable. Where environmental impacts are inevitable, mitigating measures and/or rehabilitation are used.

All programs contribute to achieving the broad objective of identifying and conserving unique, representative or endangered physical, biological, cultural and historical features of the province.

Individual program objectives support the ministry's environment policy as evidenced by the following:

Forestry *"...consistent with sound environmental practices, and to provide for other uses of the forest."* (page 13);

Mineral Aggregates *"...with minimal disturbance to the natural and social environment."* (page 15);

Fisheries *"...consistent with the maintenance of healthy fish communities."* (page 18);

Wildlife *"...consistent with the maintenance of healthy wildlife populations."* (page 20);

Provincial Parks *"to protect provincially significant elements of the natural and cultural landscape of Ontario."* (page 23);

General Recreation *"to identify, select and protect provincially significant natural and cultural resources."* (page 28).

Energy

The ministry will undertake its resource management programs so as to contribute to provincial energy objectives.

As outlined in *Energy Security for the Eighties: A Policy for Ontario*, Ontario is committed to a major effort to increase its capacity for

energy self-sufficiency. Accordingly:

- by 1995 Ontario will supply a minimum of 37½ percent of its energy from sources within the province (1978 amount was 23 percent);
- by 1995 at least 15 percent of Ontario's energy will be from renewable and recoverable resources including hydraulic resources (1978 amount was 13 percent).

The Ministry of Natural Resources is currently involved in three aspects of achieving these targets. They are:

- increasing effort in energy efficiency, hydraulic power, use of lignite, solar energy, co-generation, by-products and conservation;
- participating in inventory programs to determine the size of Ontario's water, coal, peat, oil, gas and forest resources;
- participating in energy recovery programs based on, amongst other material, forest residues.

The provincial targets in Table 1 have been developed for Ontario's natural resources. Southern Ontario targets have not yet been developed.

Table 1: Provincial targets for energy production from Ontario natural resources

Resource	1995 target for total energy needs(percent)	Increase over 1978 level of supply (percent)
oil and gas	0.3	59
lignite	1	n/a
hydraulic	10	37
uranium	19	204
forest biomass	2	478

B. PROGRAM POLICIES

Forestry

The forestry objective is to provide for an optimum contribution to the economy by forest-based industries consistent with sound environmental practices, and to provide for other uses of the forest.

The target for wood production in southern Ontario is to produce an annual continuous supply of 209 million cubic feet (5.91 million cubic metres) of wood for industrial purposes by the year 2020 while maintaining the present diversity of forest products. In addition, a supply of wood will be produced to make the maximum contribution to the achievement of the biomass energy target.

In southern Ontario about 65 percent of the land estimated to be available for wood production is in private ownership. Generally, this land has a higher capability for forest growth and supports a greater diversity of tree species than Crown lands. Forests on private lands are essential to the achievement of the wood production target in southern Ontario. Wood production targets cannot be met from Crown land alone. In fact, Crown land, even with very intensive management, can provide no more than 40 percent of industrial needs.

Forests, in addition to industrial uses, provide substantial and often unrecognized values important to society. These include erosion reduction, the production of fuelwood, the provision of wildlife habitat and outdoor recreation opportunities. The ministry's strategies for southern Ontario consider the total contribution from forests.

It is estimated that the southern Ontario wood-using industry consumes 131 million cubic feet (3.71 million m³) of wood annually, about equally divided between sawlog and veneer, and pulpwood and miscellaneous products. Significantly though, southern Ontario forests provide over 70 percent of Ontario's sawlog and veneer material. This material is, to a large extent, quality hardwood which does not grow in most of northern Ontario.

Total present southern Ontario harvest excluding fuelwood¹, is about 94 million cubic feet (2.66 million m³) of which 9 million cubic feet (0.25 million m³) is exported. Thus, southern Ontario industry consumes some 45 million cubic feet (1.3 million m³) of wood which is obtained from northern Ontario or from outside the province. Due to a potential supply deficit in the United States and the rising cost of wood, Ontario will become increasingly dependent on timber grown in the province.

The total area of productive forest land² in southern Ontario estimated to be potentially available for timber production is 9 million acres (3.6 million ha). The present average annual growth of 33 cubic feet per acre (2.3 m³/ha) will permit an annual harvest of 300 million cubic feet (8.49 million m³) of wood. Much of this allowable harvest is low grade material.

The target for wood production can be achieved from the available productive forest land, but harvest must be increased from 30 percent to 70 percent of present growth. To increase the portion of quality wood products to the level required to meet the target requires extensive forest renewal and improvement. The task is complicated by the large number of individual owners, the small size of holdings, the lack of incentives and, often, the presence of disincentives to private land forestry.

The target of 209 million cubic feet (5.91 million m³) is not designed to meet the anticipated demand but rather represents the volume that could result from the approved forest production policy. It is projected that by the year 2025, the industrial demand in southern Ontario will be nearly 250 million cubic feet (7 million m³). In addition, increased demand for other forestry benefits including outdoor recreation and energy contributions are anticipated. Therefore, it is important to maintain more forested areas than would be required to meet the present target. When the current forest inventory is completed, the southern Ontario target and regional allocations will be revised and management effort adjusted.

¹ Production statistics for fuelwood are not available but it is estimated that fuelwood volumes would raise the total harvest figure by one-half to two-thirds.

² Productive forest land includes existing forested land and open land of low agricultural capability suitable for planting.

Mineral Aggregates

The objective for mineral aggregates production is to meet anticipated future demand with minimal disturbance to the natural and social environment.

The target for mineral aggregates production in the period 1980-2025 is to ensure that a total cumulative supply of 7.54 billion tons (6.84 billion tonnes) is available. The target represents the minimum supply which must be protected. Beyond this, the ministry will seek protection of as much additional aggregate as is practicable in the context of other necessary land-use planning objectives.

The target is based on a 1.5 percent annual increase to the year 2000 and a 2 percent increase thereafter. The assumption in this projection is that present aggregate production meets current demands.

The target represents a major decrease from previous projections. The shift of Ontario's economy from a phase of rapid expansion to a more gradual growth is evident in recent years. This has been reflected in a stabilization in the level of aggregate production. Aggregate production is primarily devoted to road and building construction, and since this sector is not expected to experience as much growth in the foreseeable future, the recent trends appear to provide a realistic basis for the projections.

In 1979, mineral aggregates production in southern Ontario was approximately 110 million tons (100 million tonnes). Less than five percent of this was derived from Crown land.

The known supplies of aggregate in southern Ontario are adequate to meet the target. Nonetheless, because of the highly localized nature of the demand and production, there will probably be some shortages of desired types and qualities of aggregate, particularly sand and gravel. This problem is due to the highly variable characteristics and distribution of resources as well as the loss to development of many resource areas that eliminate the opportunity for extraction.

Because of the high cost of transportation, it has been most economic to obtain aggregate near urban centres of demand. Furthermore, the land required for production is frequently the focus of competition for residential, recreational, agricultural and other uses. Past problems with some aggregate operators have created a climate of hostility to proposals for aggregate production. If adequate resources are to be available, the industry must work closely with provincial and municipal governments to reduce the conflicts and minimize the adverse impacts of aggregate extraction.

With the possible exception of the Algonquin administrative region, Crown lands in southern Ontario are not expected to make a significant contribution to the provisions of aggregates. The resources on Crown lands are generally remote from the demand and are less significant in quantity; therefore, it is expected that over 95 percent of aggregate production will continue to come from private land. The target provides for anticipated demand to the year 2025 and thus it represents only the minimum supply of aggregates which must be protected to meet future needs.

Minerals and Fossil Fuels

The objective is to provide for a strengthening of the contribution of mineral resources and fossil fuels to provincial economic development and energy production.

The target for mineral resources is to keep open as much land as possible for mineral exploration and development.

The target for oil and gas is to encourage an increase in production to provide 0.3 percent of the total provincial energy needs by 1995. This requires a 59 percent increase from the 1978 level of production.

Specific mining production targets cannot be established because of difficulties in predicting market trends and assessing resource potential.

The value of mineral and fossil fuel production in southern Ontario in 1976 was about 105 million dollars. This was about five percent of the provincial total.

In the future, demands for many minerals are expected to increase. Changing commodity values, technology markets and the demand for energy sources may alter the relative importance of various minerals. Thus, the demand for a specific mineral may change rapidly. The mining industry requires a relatively high rate of return on investment corresponding to risk and a satisfactory rate of discovery to replace deposits of a non-renewable resource. Land use related problems faced by the mining industry in southern Ontario include removal of lands from staking and/or mineral exploration before their potential has been adequately assessed and the difficulty of obtaining exploration and mineral rights on private land.

At present Ontario consumes 550,000 barrels ($65,615 \text{ m}^3$) of oil and 1,800 million cubic feet ($50.96 \text{ million m}^3$) of gas per day. The 1979 rates of provincial production were estimated at 1,600 barrels (190.0 m^3) of oil and 40 million cubic feet (1.13 million m^3) of gas per day.

The majority of this production comes from southwestern Ontario. There is potential for new discoveries in this part of the province, although Lake St. Clair and Lake Huron are currently closed to exploration by international agreement with the United States, and, at present, only gas production is allowed from Lake Erie.

Ontario's total 1979 gas production was some 15 billion cubic feet (0.42 billion m^3) of which about two-thirds came from Lake Erie. This is only two percent of the provincial demand for gas. An additional aspect of this industry is storing western gas in depleted reservoirs which will accommodate approximately a two-month's supply of the province's annual needs.

Fisheries

The objective for fisheries management in southern Ontario is to provide optimum recreation and economic benefits consistent with the maintenance of healthy fish communities. Where recreation and commercial use of fisheries resources are in competition, angling will normally be favoured.

The objective for sport fishing is to meet demand within the limits of a wisely managed and rehabilitated resource. The target is 21 million pounds (9.5 million kilograms) which will provide 30 million recreation opportunities by the year 1999.

The objective for commercial fishing is to maintain a viable industry in southern Ontario. The target is 32 million pounds (14.5 million kilograms) of fish annually by the year 1999.

The objective for bait fishing is to maintain current production. The 1999 target is 6.8 million dozen bait fish. This production is in addition to the commercial fishing target.

Provincially rare and endangered fish species will be identified and appropriate action taken for the protection of these species.

The targets for commercial and sport fishing have been adjusted to reflect the most recent estimates of biological production. The sport fishery allocation is based on all inland waters production and 25 percent of Ontario's share of the Great Lakes production. The commercial fishery is assigned the balance of Ontario's share of Great Lakes production. The targets propose use of up to the sustainable yield of the fishery of southern Ontario.

The fundamental connection between healthy fish populations and the objective to provide optimum recreation and economic benefits must be remembered. Ontario's fish resources have been significantly altered over the past decades. The intention is to restore a balanced fish

population which can provide for a viable commercial fishery. As part of this, the value of the harvest will likely increase, although probably from a reduced volume of harvest.

The strategic plan for Ontario fisheries is the first comprehensive analysis of the province's fish resources. Much of the data which will result from this effort is not yet available, therefore, many of the quantitative conclusions in this report are based on incomplete data and will be given careful review as part of any revision to the *Co-ordinated Program Strategy*.

Over the past ten years the commercial fish harvest in southern Ontario has ranged from a high of 54 million pounds (24.49 million kilograms) to a low of 32 million pounds (14.51 million kilograms). In recent years, the catch has averaged about 44 million pounds (19.95 million kilograms). The sport fish catch is believed to be about 21 million pounds (9.53 million kilograms), giving a total catch of 65 million pounds (29.48 million kilograms).

It is estimated that the potential sustainable yield of southern Ontario waters is 53 million pounds (24.04 million kilograms), thus, the current harvest is greater than the potential yield. The target reflects both the intention of reducing the harvest to the biological limits of Ontario's waters to produce fish, and the policy of favouring angling over commercial harvest. This means that, in the case of commercial fishing, there will be a reduction in harvest from 44 million pounds (19.95 million kilograms) to 32 million pounds (14.41 million kilograms). This reduction must occur to maintain healthy fish communities and a viable industry.

For angling, the target remains at the current harvest of 21 million pounds (9.53 million kilograms). Although 75 percent of the Great Lakes fishery is assigned to commercial fishing, it is unlikely that further Great Lakes production could be assigned to the sport fishery because of access limitations and lack of species available by angling. Because it is expected that fishing participation will continue to increase, there will likely be a decline in average catch, although it is expected that there should be a corresponding increase in quality of catch.

There are four problems associated with achieving these targets. First, careful manipulation of harvest within the limits of the resource is difficult under present management controls. Second, considerable habitat restoration is essential to achieve potential production from naturally occurring populations. Third, acid rain may reduce the productivity of many lakes in the northern part of the planning region. Fourth, angler success rates may decline. Public acceptance, therefore, will play an important part in choosing among increasing supply from other than naturally occurring fish populations, reducing demand, or revising the allocations.

Wildlife

The objective for wildlife management in southern Ontario is to provide optimum social and economic benefits from wildlife recreation and fur harvest consistent with the maintenance of healthy wildlife populations.

The fur objective is to sustain the maximum yield from fur-bearer populations.

The target for fur production is to manage populations of fur-bearers such that an average harvest of 650,000 pelts by the year 2000 can be achieved while maintaining the present diversity of fur species.

The wildlife recreation objectives are:

- to provide opportunities sufficient to maintain the present rate of participation and quality of hunting by residents;*
- to maintain the contribution to the economy of hunting by non-residents;*
- to provide opportunities for increased appreciation of wildlife and wildlife habitat;*
- to identify and protect provincially rare and endangered species of wildlife and their habitat.*

The targets for wildlife recreation in southern Ontario are:

- . to provide by the year 2000, 2.9 million opportunities of hunting recreation per annum, comprising 0.5 million opportunities of big game hunting, 1.6 million opportunities of small game hunting and 0.8 million opportunities of waterfowl hunting;*
- . to provide by the year 2000, 2.5 million opportunities for wildlife viewing on provincial lands.*

The fur target represents a moderate increase in trapping and is the level of harvest existing fur-bearer populations are capable of supporting. Increases in fur-bearer populations, particularly muskrat and other aquatic fur-bearers south of the Precambrian Shield are not possible without major habitat changes that could conflict with other activities such as agriculture. On the Precambrian Shield, beaver populations and aquatic fur-bearers which use beaver ponds, are considered to have achieved or exceeded capacity. Further increases are not possible without upsetting the population/habitat balance.

In 1979, a year of very high fur prices and corresponding high trapping activity, 584,000 pelts were harvested.

Critical factors which may limit fur harvest in the future are a possible collapse of the beaver population on the Precambrian Shield as a result of overpopulation, problems in obtaining access to private property, the uneven distribution of trapping efforts, loss of habitat and public opposition to trapping.

Surveys indicate that small game and waterfowl hunting by residents and non-residents has declined from 3.2 million occasions in 1970 to 1.9 million occasions in 1978. This decline has been attributed to loss of wildlife habitat, increasing restrictions on access to private land, declining hunter success and decreased interest in these activities.

The small game and waterfowl hunting targets assume that present participation rates will continue, and any increases that occur will result from population growth.

Although the hunting targets are considerably lower than past projections, they nonetheless, will be difficult to achieve.

Big game hunting in southern Ontario is predominantly for deer. Deer populations on the Precambrian Shield have decreased by more than two-thirds in the last 25 years. Major increases in deer population can occur only through increased control of harvest, increased enforcement effort, increased predator control and increased forest disturbance coupled with preservation of essential winter coniferous cover.

South of the Precambrian Shield, deer populations have benefited from mild winters, local high quality habitat and lack of hunting pressure. In this area, there is considerable potential for providing deer hunting opportunities where hunting seasons can be established.

Sixty percent of both big game and small game hunting occurs on private land. Access to these lands for hunting is becoming increasingly difficult. Achievement of both big game and small game hunting targets is, therefore, contingent on access to private land and on ensuring that municipal controls do not eliminate the opportunity to hunt. Efforts to limit the deterioration of wildlife habitat will be beneficial, but habitat deterioration may still limit the possibility of target achievement.

The target for wildlife viewing proposes a ten percent increase in the rate of participation in this activity in addition to the increase in participation which could be anticipated as a result of population growth.

Wildlife viewing in provincial areas, i.e., provincial parks, wildlife management areas and Crown lands, in 1973 was estimated at 1.7 million occasions and represented about 20 percent of all wildlife viewing in southern Ontario.

Provincial Parks

The objectives of the provincial parks system are:

Protection: to protect provincially significant elements of the natural and cultural landscape of Ontario;

Recreation: to provide provincial park outdoor recreation opportunities ranging from high intensity day use to low intensity wilderness experiences;

Heritage

Appreciation: to provide opportunities for exploration and appreciation of the outdoor natural and cultural heritage of Ontario;

Tourism: to provide Ontario's residents and out-of-province visitors with opportunities to discover and experience the distinctive regions of the province.

The targets for each of the four objectives of the provincial parks system in southern Ontario are:

Protection Earth Science:

to protect a system of provincially significant representative and special earth science features through representation of each unit of southern Ontario's earth science history;

Life Science:

to protect a system of provincially significant life science features through representation of each vegetative site type in each of the site regions in southern Ontario (map 5);

Historic Resources:

to protect a system of provincially significant landscape-related prehistorical and historical resources through representation of each theme segment of southern Ontario's history.

Recreation Day Use:

to provide to the people of southern Ontario by the year 2001, an accessible basic supply of swimming and picnicking opportunities in provincial parks, comprising 1,450 opportunities per 1,000 persons per year;

Extended Use:

to provide to the people of southern Ontario by the year 2001, an accessible basic supply of developed camping opportunities in provincial parks, comprising 420 camper days per 1,000 persons per year;

Back Country:

to provide to the southern Ontario population by the year 2001, a supply of back country opportunities in provincial parks, comprising 43 back country days per 1,000 persons per year.

Heritage Appreciation

To maximize opportunities for unstructured individual exploration and appreciation of the outdoor natural and cultural heritage of southern Ontario;

to maximize opportunities for exploration and appreciation of the outdoor natural and cultural heritage of southern Ontario through the provision of a wide variety of interpretive and educational programs.

Tourism

To provide a basic supply of camping and day use opportunities for tourists in provincial parks in southern Ontario, allowing for a growth rate equal to the population growth rate for major tourism market areas.

The provincial park system is permanent, distinctive, representative, varied and accessible. It will be complementary to the private sector and other public agencies.

The provincial park objectives will be achieved through specific park classes and zones within these classes. There are six classes of provincial parks: wilderness, nature reserve, historic, natural environment, waterway and recreation. In southern Ontario, there are 43 recreation parks, 18 natural environment parks, 1 historic park and 7 nature reserves.

Each class contributes to the achievement of specific objectives, but only the natural environment class can contribute to the achievement of all objectives. Other classes have a more limited role in achieving the objectives. For example, nature reserve parks contribute primarily to the achievement of the protection objective.

Site regions and site districts provide a basis for the representation of biological and physical features in wilderness, nature reserve,

natural environment and waterway parks (map 5 and glossary).

Existing parks and park reserves are being studied to assess their contribution to the objectives. The extent to which the objectives are achieved in existing provincial parks is identified in tables 2 and 3.

Of the 13 site districts not represented by existing natural environment parks, 10 could be represented by park reserves and park system candidates and 1 by conservation authority land. The remaining two site districts cannot be represented because of the lack of suitable lands.

For waterway parks, 3 site districts are represented in natural environment parks and an additional 4 site districts can be represented by reserves and candidate parks. Representation of some of the balance of the site districts may be possible through co-operation with other public agencies.

Of the three site regions in southern Ontario, only 5E could be represented by a wilderness park. In site region 6E, it is possible to achieve only partial representation through wilderness zones in other classes of parks. In site region 7E, no representation is possible.

There is only one historic park in southern Ontario. The full extent of representation is not known. Further study is required.

When the studies of earth and life science resources are completed, additional areas for nature reserve parks may be identified. It may be necessary to enlist the co-operation of other public agencies and private landowners to protect the targets.

To the extent possible, recreation targets will be met within natural environment, waterway and wilderness parks. Where these targets cannot be met, recreation class parks will be established on provincially significant recreation landscapes.

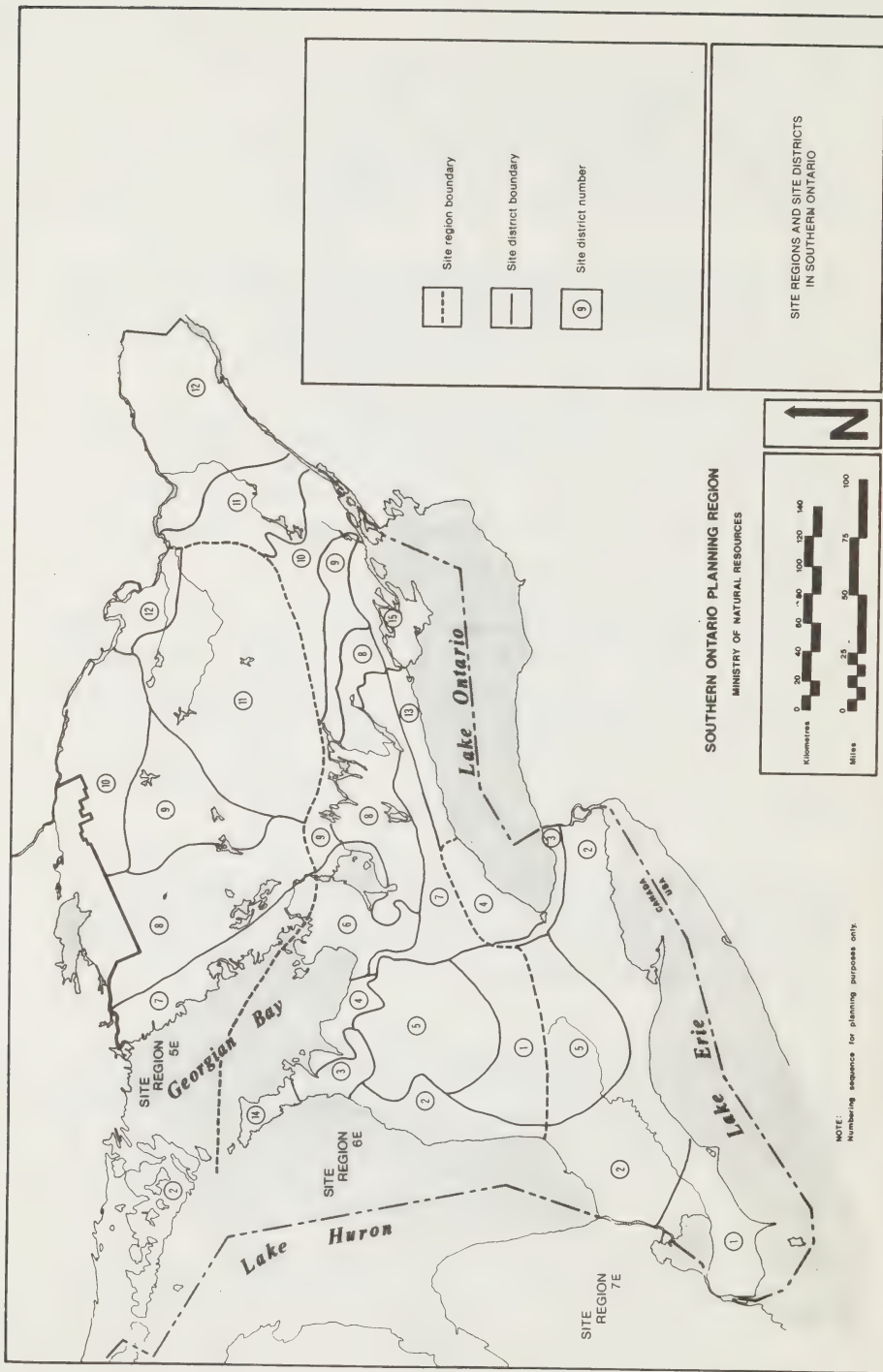


Table 2: Present and future degree of representation
(Protection/Heritage Appreciation objectives)

Class of Park	Existing Parks	No. of units represented	No. units not represented	Total future representation
Natural Environment	18	13 site districts	13 site districts	26 * site districts
Waterway	2	3 site districts	23 site districts	26 * site districts
Wilderness	1 (incomplete)	1 site region (incomplete)	2 site regions	2 site regions (1 incomplete)
Historic	1	unknown	unknown	unknown
Nature Reserve	7	unknown	unknown	unknown
Recreation	43	Recreation class parks do not contribute to the achievement of Protection/Heritage Appreciation objectives.		

* It is probably not possible to represent all 26 site districts.

Table 3: Present and future recreation supply
(Recreation/Tourism objectives)

Activity	Opportunities Currently Available (1976)	Additional Opportunities Required (2001)	Total Future Opportunities
	thousands of opportunities		
Day Use:			
Swimming	8,483	3,921	12,404
Picnicking	5,055	2,520	7,575
Extended Use:			
Camping	4,078	1,534	5,612
Back country	322	126	448
Total	17,938	8,101	26,039

To meet the recreation and tourism targets, the amount of recreation provided in provincial parks must increase from 18 million to 26 million opportunities by the year 2001 (table 3). This will permit provincial parks to maintain their present contribution to the provision of recreation in southern Ontario.

While additional parks may have to be established to meet targets and future needs, there are some existing facilities which may be transferred to another jurisdiction or to the private sector because of their limited contribution to provincial parks objectives.

Proposed changes in the provincial parks system will relate directly to the distinctive nature of provincial parks and will be complementary to, rather than competitive with, the private sector and other agencies.

General Recreation

The following section refers to those recreation activities involving resources other than fish and wildlife and taking place outside provincial parks.

The objectives for these other recreation activities are:

- . to provide and to encourage the provision of a wide variety of recreation opportunities ranging from day use to back country experiences;*
- . to identify, select and protect provincially significant natural and cultural resources;*
- . to provide an economic contribution through tourism.*

Total recreation use in southern Ontario for the activities of boating, picnicking, cross-country skiing, snowmobiling, swimming and hiking was about 160 million occasions in 1974. About 10 percent of this recreation occurred in provincial parks and an additional 6 percent occurred on Crown land.

It is evident that a very large amount of outdoor recreation occurs outside provincial parks. Popular recreation areas include conservation authority lands, municipal and commercial parks and facilities, county

and agreement forests, private land, and undesignated Crown land and water.

A comprehensive recreation policy that integrates all program elements of all agencies is lacking. The ministry cannot unilaterally develop such a policy nor can it identify a role in the provision of recreation for other agencies, municipalities or the private sector. Such a policy is desirable in order to provide a perspective for the various programs and incentives for recreation in southern Ontario. Thus, the ministry will work with these agencies toward the development of a co-ordinated recreation policy for southern Ontario.

IV. STRATEGY FOR SOUTHERN ONTARIO

On the preceding pages, the objectives and targets for the ministry in southern Ontario have been stated. On the pages which follow the strategy for achieving the objectives and targets is outlined. The strategy identifies where and generally how the ministry proposes to achieve its objectives in southern Ontario.

A. GENERAL STRATEGIES

To ensure integrated management the ministry will:

- . prepare strategies for each ministry administrative district which provide direction for management planning;
- . consider all resource benefits when developing management plans and, where feasible, prepare resource management plans which will achieve the objectives of two or more programs;
- . provide comprehensive and accurate mapping and inventory through the Ontario Basic Mapping program and the Ontario Centre for Remote Sensing.

To ensure adequate resources are available to achieve ministry targets and to ensure that, at a minimum, sufficient resources are protected to meet the targets, the ministry will:

- . identify primary resource areas on both public and private land and promote designation of such areas in municipal and ministry plans to discourage non-compatible uses;
- . administer and manage public lands and waters to contribute to the achievement of ministry and other government objectives;
- . provide effective and comprehensive extension services dealing with activities of the ministry requiring private land;
- . provide comprehensive public education/information programs dealing with natural resources, their management and use;

- . communicate effectively with other provincial, federal and municipal agencies to ensure that the policies, programs and actions of these groups and those of the ministry are supportive and complementary;
- . direct effort toward increasing knowledge of southern Ontario resources. This will include practical research designed to improve management, and in particular, to assist private landowners.

To contribute to public safety, the ministry will, in conjunction with conservation authorities and other agencies:

- . discourage new development in areas susceptible to flooding, erosion and earth slippage or permit development only with adequate protection and safeguards;
- . participate in contingency planning, flood forecasting and provision of remedial works such as dams and channelization where development already exists within hazardous areas;
- . participate in flood plain mapping in developed areas;
- . suppress forest fires in the fire region (map 6) based on the following priorities: human life, private and public property, timber production and wildlife habitat;
- . develop co-operative fire prevention and control agreements with municipalities, railways and forest industries;
- . ensure that development and resource extraction activities in forested areas are designed to reduce the possibility of fire spread;
- . act as the lead agency in a planned program for response to fire and flood emergencies;
- . promote the hunter safety training program;
- . ensure adequate safety measures are provided at abandoned pits, quarries and mining shafts.

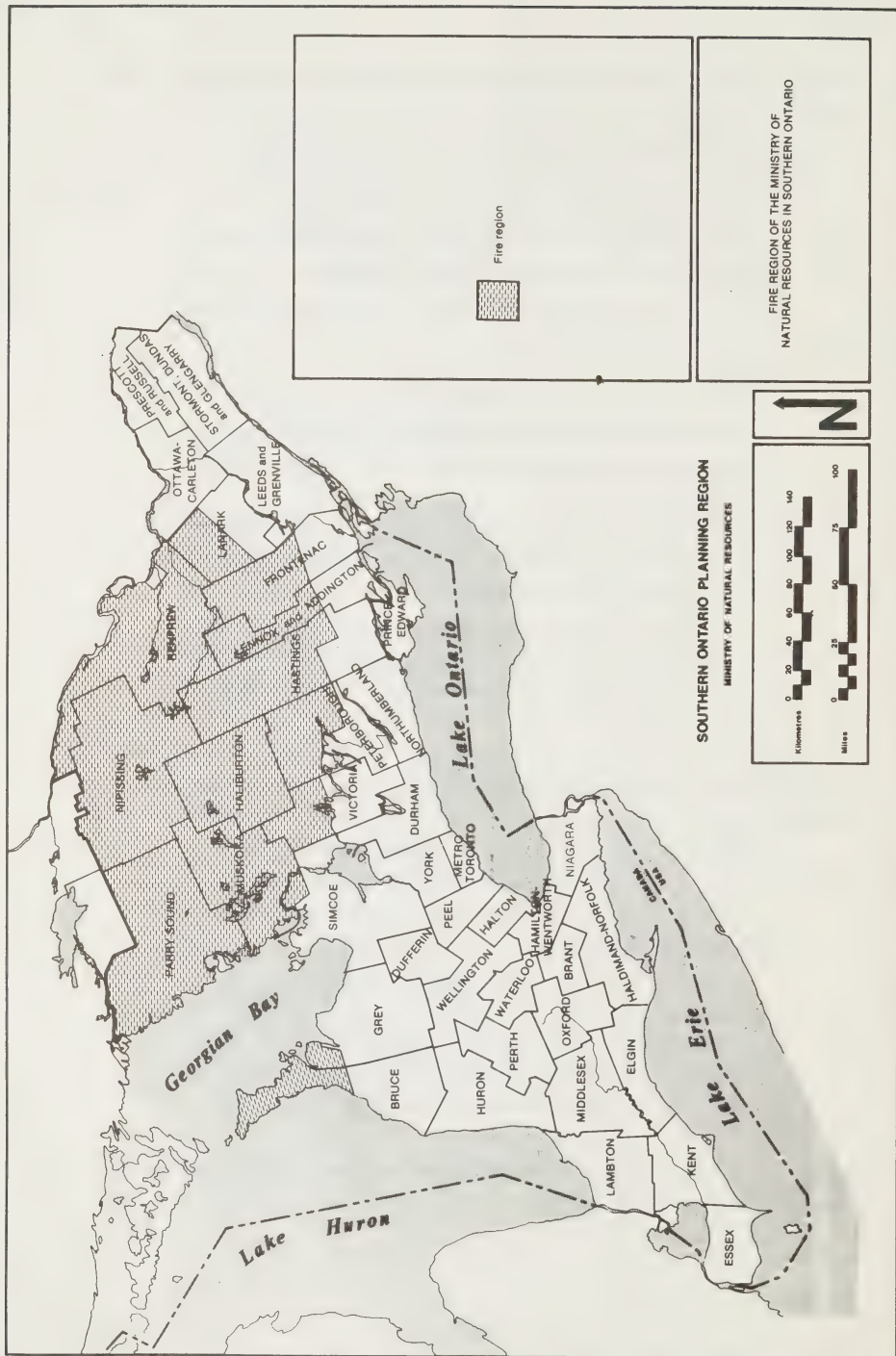
To ensure the achievement of the environment policy, the programs of the ministry will:

- . manage renewable resources on a biologically sound basis involving the management of entire plant and animal communities rather than single species;
- . manage non-renewable resources to meet current demands, giving attention to anticipated future needs. This will include encouraging recycling and discouraging the use of high quality materials where lower quality materials would suffice;
- . in conjunction with conservation authorities, manage and regulate watersheds including ground water re-charge and source areas, valley lands and waterfront areas;
- . identify and seek to protect significant and representative wetlands and ensure that their values are given due recognition in planning;
- . identify and protect the habitat of provincially rare and endangered fish, animals and plants (Appendix C);
- . monitor the affects of acid rain on natural resources.

To contribute to achievement of the government's energy policy, the ministry will:

- . determine what incentives may be required to make wood in some form an acceptable energy alternative;
- . conduct an energy production potential inventory of ministry operated dams;
- . install solar power water heating systems in selected facilities;
- . assess the opportunities of heating institutions located near sources of supply with biomass fuels;
- . develop a comprehensive ministry energy action plan.

Additional energy strategies are discussed in the forestry and mineral resources section which follow.



SOUTHERN ONTARIO PLANNING REGION
MINISTRY OF NATURAL RESOURCES

FIRE REGION OF THE MINISTRY OF
NATURAL RESOURCES IN SOUTHERN ONTARIO

B. PROGRAM STRATEGIES

FORESTRY

The target for annual wood production by the year 2020 for industrial purposes in each administrative region is as follows:

Target Administrative Region	Algonquin	Central	Eastern	South- western	Southern Ontario Total
Millions of cubic feet (cubic metres)	104.4 (2.96)	26.0 (0.74)	50.0 (1.42)	29.0 (0.82)	209.4 (5.93)

The targets reflect the total amount of productive forest land in each administrative region modified by considerations of land ownership, potential productivity and competing land uses.

The emphasis in forestry will be to enhance the forest of southern Ontario through the improvement and maintenance of existing wooded areas and the selective reforestation of land with lower agricultural capability.

To achieve the target for industrial wood production and to provide for other uses of the forest, including energy production, the ministry will:

- maintain and selectively increase the area of forested land in southern Ontario; in particular, maintain forest production on existing woodlots in agricultural areas, maintain and selectively increase forest production on Crown land and low capability agricultural lands, and introduce rapid growing and short rotation species on appropriate sites. The emphasis on management of existing productive forest will increase; increase forest management efforts to improve quality and production, to provide a better environment for recreation and to provide land management benefits from both private and public lands. The selection of

priorities for management and agreements in each district must include consideration of all of these benefits;

- encourage the use of wood for fuel and other alternate energy supplies;
- conduct biomass inventory studies;
- investigate the possibility of producing forest biomass for energy production;
- apply specific management prescriptions as required to conserve significant and representative forest environments;
- promote the development and assist the implementation of effective marketing of forest products, including fuelwood, other low grade material and specialty products;
- investigate means to improve forest management in southern Ontario;
- participate in the preparation of management plans jointly with other programs which assist in the achievement of all ministry objectives.

Mineral Aggregates

The target in each administrative region is to ensure that the following projected cumulative demand for mineral aggregates can be met in the period 1980 - 2025.

<i>Administrative Target</i>	<i>Algonquin</i>	<i>Central</i>	<i>Eastern</i>	<i>South- western</i>	<i>Southern Ontario Total</i>
<i>Billions of tons (billions of tonnes)</i>	<i>.29 (0.26)</i>	<i>4.70 (4.26)</i>	<i>1.07 (0.97)</i>	<i>1.48 (1.34)</i>	<i>7.54 (6.84)</i>

The targets reflect the total production of aggregate which must be achieved during the next 45 years to meet projected demand within each administrative region.

The intent of the mineral aggregate program strategy is to ensure continued availability of aggregates while considering legitimate concerns regarding the impact of extraction both on site and on surrounding areas.

To achieve the target for mineral aggregates the ministry will:

- . provide basic resource data and a definition of local and provincial needs to permit identification of the areas required to meet those needs;
- . ensure that official plans and zoning by-laws protect mineral aggregate resource areas in recognition of continuing local regional and provincial needs. The ministry and municipalities working jointly will identify the specific resources to be protected;
- . encourage higher priority for protection of natural aggregate (sand and gravel) due to its more limited extent and greater value than crushable stone;
- . develop provincial policy which establishes the provincial interest in mineral aggregates and defines the role of municipalities;
- . require progressive extraction and progressive rehabilitation so that aggregate extraction represents an interim land use activity with a minimum disturbed area at any one time;
- . ensure that extractive operations have a minimum impact on adjacent land uses;
- . establish evaluation and approval procedures for new operations and for expanding existing operations including consideration of special features and resources;
- . require good operating standards to reduce the impact of existing and proposed operations;
- . investigate means whereby the supply burden of certain high production municipalities can be reduced, including examining alternative sources, the feasibility of long distance hauling, recycling and substitutes.

Minerals and Fossil Fuels

The mineral resource target in each administrative region is to maintain as much land as possible open for mineral exploration and development.

The target for oil and gas is to encourage an increase in production to provide 0.3 percent of the total provincial energy needs by 1995.

To achieve the objective and targets, the ministry will:

- ensure mineral values are evaluated before a permanent commitment of public land to non-mining uses occurs. Appropriate mechanisms will be used to ensure that the ministry retains the discretionary power to withhold development rights if other values exceed the mineral values;
- encourage municipalities to support mineral exploration and extraction;
- in conjunction with other government agencies, encourage industry to bring new deposits into production as soon as economic conditions permit and encourage further domestic processing of ore;
- delineate favourable geological areas and expand the geoscience data base through collection, storage and dissemination of information;
- encourage exploration in known oil and gas bearing deposits in southern Ontario;
- improve our understanding of conventional hydrocarbon potential by further surveys and research in order to establish the limits of Ontario's oil and gas potential;
- investigate the possibility of increasing fossil fuel production from under the Great Lakes, including opening Lake Huron and Lake St. Clair to oil and gas production;
- administer the drilling and extraction of fossil fuels to meet acceptable environment standards;
- protect representative and outstanding geological features.

Fisheries¹

The 1999 targets for commercial fish production are as follows:

		millions of pounds of fish (millions of kilograms)			
<i>Lake</i> \ <i>Administrative Region</i>	<i>Algonquin</i>	<i>Central</i>	<i>Eastern</i>	<i>South-western</i>	<i>Southern Ontario Total</i>
<i>Huron</i>	0.39 (0.18)	0.20 (0.09)	---	1.70 (0.77)	2.29 (1.04)
<i>Erie</i>	---	0.61 (0.28)	---	26.57 (12.05)	27.18 (12.33)
<i>St. Clair</i>	---	---	---	0.69 (0.31)	0.69 (0.31)
<i>Ontario</i>	---	0.04 (0.02)	1.78 (0.81)	---	1.83 (0.83)
<i>Total</i>	0.39 (0.18)	0.86 (0.39)	1.78 (0.81)	28.95 (13.13)	31.99 (14.51)

The 1999 target for bait fish is to maintain the present level of production of 6.8 million dozen fish annually.

<i>Target</i> \ <i>Administrative Region</i>	<i>Algonquin</i>	<i>Central</i>	<i>Eastern</i>	<i>South-western</i>	<i>Southern Ontario Total</i>
<i>Millions of dozen</i>	0.28	3.62	0.32	2.61	6.83

¹ The targets for fisheries are based upon the best information presently available. There are serious inadequacies in estimates of present harvest and productivity. As this information is refined, the targets and the allocation between sport and commercial fishing will be re-evaluated.

The 1999 sport fishing target is to maintain present diversity of fishing opportunities. Regional targets are as follows:

Administrative Region Target	Algonquin	Central	Eastern	South- western	Southern Ontario Total
Millions of pounds of fish (millions of kilograms)	5.2 (2.4)	6.5 (2.7)	5.9 (2.9)	3.7 (1.7)	21.3 (9.7)
percent cold water fish (lake trout, brook trout, rainbow trout)	14	15	3	9	11
percent cool and warm water fish	86	85	97	91	89
recreation opportunities (millions of opportunities)	7.2	9.5	6.5	7.0	30.2

In the targets, the total production of inland waters and 25 percent of the production of Great Lakes waters is assigned to the sport fishery. The remainder, 75 percent of Great Lakes production, is allocated to the commercial fishery¹.

The target in terms of fishing recreation opportunities is based on the assumption that the current distribution of fishing will be maintained.

The emphasis in fisheries management will be on the achievement of the targets from naturally occurring fish stocks. The ministry will therefore:

- ensure harvests are consistent with the productivity of individual fisheries including reducing the commercial fish harvest in southern Ontario to within the potential yield estimates, i.e., from 43 million to 32 million pounds (19.5 to 14.5 million kilograms) annually;

¹ A limited amount of commercial fishing occurs in inland waters but is not included in the allocation due to the very small harvest involved.

- . protect critical fish habitat including spawning beds, nursery areas and water quality and carry out restoration where necessary and possible;
- . manage fish communities rather than individual species;
- . seek the protection of special fisheries habitat and rare species through appropriate designation in provincial parks and other areas;
- . establish assessment units on representative lakes and investigate aquatic communities, the mechanisms which determine fisheries productivity, and sport and commercial fishing;
- . employ techniques to assess use more effectively; for example, to assess angling activity, success rates and harvest more accurately;
- . maintain access to recreational fishing waters and improve the distribution of fishing pressure within each administrative region;
- . assist marketing and recreational use of presently under-utilized fish species;
- . direct practical fisheries investigations toward providing technological improvements for more selective commercial fishing;
- . create and maintain artificial fisheries to provide angling opportunities in areas of concentrated demand;
- . undertake co-operative fisheries management activities with conservation authorities, organized groups and the private sector.

Wildlife

The target for fur production in the year 2000 in each administrative region is as follows:

Administrative Region Target	Algonquin	Central	Eastern	South- western	Southern Ontario Total
thousands of pelts	145	125	180	200	650

The wildlife recreation targets for the year 2000 in each administrative region are as follows:

Administrative Region Target	Algonquin	Central	Eastern	South- western	Southern Ontario Total
	(thousands of opportunities)				
small game hunting	389	442	311	447	1,589
waterfowl hunting	128	179	273	223	803
big game hunting	280	65	80	50	475
wildlife viewing (in provincial areas)	245	1,525	185	570	2,525

The targets are based on the premise that traditional hunting patterns will continue in Ontario. Specifically, most day use activity will continue to occur in the region of residence. Deer hunting will continue to occur primarily in the Algonquin administrative region although new programs will be directed towards establishing deer hunting seasons in the other southern regions.

The emphasis in the wildlife management program will be to enhance wildlife habitat in southern Ontario and to maintain or improve access to private lands.

To achieve the targets for fur production and wildlife recreation the ministry will:

- . seek the protection of significant wetlands which provide wildlife habitat;
- . protect and maintain deer wintering areas sufficient to support deer populations capable of sustaining the targeted hunting pressure;
- . encourage the preservation of suitable wildlife habitat in close proximity to and integrated with urban and rural development;
- . protect production areas and habitat of provincially rare or endangered species;
- . work with private groups and conservation authorities who can assist in the acquisition or development of wildlife habitat;
- . work with municipalities and conservation authorities to encourage the continued availability of lands for hunting;
- . encourage and provide access to a variety of viewing and hunting opportunities on public and private land. Within urban areas, this will be ensured by encouraging the establishment of wildlife areas which provide educational and non-hunting wildlife recreation opportunities. In rural areas, this will be accomplished through a significantly increased extension program to encourage management of and to increase or maintain access to, private lands and through the acquisition of critical areas;
- . direct investigations on management-related problems.

Provincial Parks

The targets for Protection/Heritage Appreciation in the provincial park system by administrative region are as follows:

Target \ Administrative Region	Number of Site Districts and Regions Represented (see map 5)				
	Algonquin	Central	Eastern	South-western	Southern Ontario Total
Natural Environment (site districts)	5	7	7	7	26
Waterway (site districts)	6	6	6	8	26
Wilderness (site regions)	1	0	*	*	1 (+ zones)
Historic	unknown	unknown	unknown	unknown	unknown
Nature Reserve	unknown	unknown	unknown	unknown	unknown
Recreation	Recreation class parks do not contribute to the achievement of Protection/Heritage Appreciation objectives.				

* representation will be achieved by a wilderness zone in another class of park

The targets for Recreation/Tourism in the provincial park system by administrative region are as follows:

Target \ Administrative Region	thousands of opportunities				
	Algonquin	Central	Eastern	South-western	Southern Ontario Total
Day Use:					
Swimming	817	4,037	3,821	3,729	12,404
Picnicking	236	2,652	1,965	2,722	7,575
Extended Use:					
Camping	1,257	1,160	1,521	1,674	5,612
Back country	446	0	2	0	448
Total opportunities	2,756	7,849	7,309	8,125	26,039

Many of the targets are contingent upon satisfactory agreements being reached with other public agencies and private landowners. This is particularly the case with the achievement of the protection objective. Although the provincial park system is designed to select and protect significant or representative landscapes, other means should also be employed. Many of the landscapes which are important in the achievement of the protection objective are located within other public holdings or on private land. All of these areas do not need to be under direct provincial ownership. Co-operative management agreements are an alternative.

To achieve the targets the ministry will:

- . rationalize the provincial parks system to ensure development and retention of only those parks that merit provincial designation;
- . as a first priority, attempt to meet all the targets in natural environment parks. Within this context, priorities for establishing new parks will consider:
 - . the degree to which the protection of unique and representative features and provincially significant areas is provided by the ministry and other agencies;
 - . the deficits of recreation opportunities in provincial parks, on all public land, and from all public and private land;
 - . the economic stimuli which could be provided to surrounding areas;
- . establish nature reserve, historic and recreation class parks as may be required;
- . develop a variety of means to meet specific targets, for example, the delivery of camping opportunities within provincial parks might be undertaken by the private sector or special interest groups with appropriate agreement and incentives providing the facilities are developed, maintained and operated to provincial standards. The assistance of other public agencies and private landowners will be sought in the achievement of the protection objective.

General Recreation

No specific targets have been developed.

With respect to the provision of recreation opportunities outside of provincial parks, the ministry will:

- . encourage the development of a comprehensive outdoor recreation policy that integrates all program elements of all agencies. One component of this would be to identify ministry targets for outdoor recreation outside provincial parks considering the opportunities provided by other agencies and the private sector;
- . participate in efforts to improve the co-ordination of assistance programs. To this end, the ministry will co-operate with and provide assistance to conservation authorities, municipalities and private organizations in acquiring, planning and developing recreation areas and facilities;
- . develop a Crown land recreation policy which deals with the variety of recreational activities which occur on that land;
- . manage and encourage the development of canoe routes and trail systems on both public and private land.

V. IMPLEMENTATION

The *Co-ordinated Program Strategy* will guide the Ministry of Natural Resources programs to the year 2000. All subsequent land use strategies and land-using activities of the ministry in southern Ontario will conform to this strategy.

The implementation of the *Co-ordinated Program Strategy* will be achieved by the following means:

- . preparation of more detailed local land use strategies which interpret the policies for southern Ontario contained in this report into objectives and targets for each administrative district and which identify more specifically where and in what manner the ministry plans to use or influence the use of land and waters;
- . preparation of detailed resource management plans which identify how the objectives and targets will be met in specific areas;
- . carrying out all activities consistent with the strategies identified in this report;
- . continued co-operation with municipalities and other agencies;
- . increased provision of services to private landowners.

VI. AMENDMENT PROCEDURES

The *Co-ordinated Program Strategy* will be reviewed by the Minister of Natural Resources every five years. In addition, it may be reviewed in response to specific new provincial land use policies, major development proposals and new information compiled during preparation of district land use strategies. Also, the public may request the Minister to review the strategy.

Prior to making any major amendment to the policies contained in this strategy, the Minister of Natural Resources will seek public comment to determine the suitability of the proposed amendment. Once the Minister has endorsed the proposed amendment, it will become a part of the *Co-ordinated Program Strategy for Southern Ontario*.

Target	Factors
Forestry	<ul style="list-style-type: none">. The targets are based on the total productive forest land in each region tempered by considerations of land ownership, potential productivity and competing land uses.
Mineral Aggregates	<ul style="list-style-type: none">. Regional targets are based on the assumption that existing production patterns will be maintained.
Fur Production	<ul style="list-style-type: none">. Targets reflect an assessment of potential production in each administrative region.
Small Game, Waterfowl and Big Game Hunting	<ul style="list-style-type: none">. Present geographic distribution of hunting participation for big game, small game and waterfowl hunting will be maintained.. Non-resident hunting opportunities will be maintained at the 1978 level in each administrative region.
Wildlife Viewing	<ul style="list-style-type: none">. The present portion of viewing occurring in each administrative region will continue.
Commercial Fishing	<ul style="list-style-type: none">. 75 percent of the fish production of the Great Lakes will be allocated to the commercial fishery.
Bait Fish	<ul style="list-style-type: none">. The present contribution of each administrative region to the supply of bait fish will be maintained.

Target	Factors
Sport Fishing	
- pounds of fish	. Total fish production of inland waters and 25 percent of production of the Great Lakes will be allocated to the sport fishery.
- recreation opportunities	. The present relative contribution of each administrative region in sport fishing opportunities will be maintained. The total opportunities are based on the <i>Ontario Fish Yield Estimates</i> .
Provincial Parks	<ul style="list-style-type: none"> . Demand for day use recreation (picnicking, swimming) will be met to the extent possible within the region in which it originates. . Back country opportunities provided will be primarily in the Algonquin administrative region with the location of one new wilderness park and the wilderness zones in Algonquin Park. . Additional back country opportunities will be sought through wilderness zones in parks in the Eastern and Southwestern administrative regions. . Site regions and site districts will be used as the basis for ensuring representation of biological and physical features in wilderness, natural environment, waterway and nature reserve parks.

APPENDIX B SUMMARY OF CURRENT PRODUCTION AND TARGETS

CURRENT PRODUCTION, HARVEST OR REPRESENTATION

Activity	Units of Measure	Base Year	Algonquin Region	Central Region	Eastern Region	South-western Region	Southern Ontario Total
FORESTRY	millions of cubic feet (millions of m ³)	1980					94 (2.66)
MINERAL AGGREGATES	millions of tons (millions of tonnes)	1979	4.23 (3.84)	68.34 (62.00)	15.59 (14.14)	21.52 (19.52)	109.68 (99.50)
MINES							
a) Mineral Exploration	n/a						
b) Fossil Fuels							
WILDLIFE							
a) Fur Production	000's of pelts	1978-79	-	-	-	-	584
b) Small Game Hunting Residents	000's of opportunities	1978	318	363	252	362	1,294
Non-Residents	000's of opportunities		1	-	4	6	11
c) Waterfowl Hunting Residents	000's of opportunities	1978	104	146	220	166	636
Non-Residents	000's of opportunities		1	1	5	21	28
d) Big Game Hunting	000's of opportunities	1978					
e) Viewing (in Provincial areas)	000's of opportunities	1973	-	-	-	-	1,700
FISH							
a) Commercial Fishing	millions of pounds (millions of kilograms)	average in recent years	-	-	-	-	44 (19.95)
b) Bait Fish	000's of dozens		284	3,618	318	2,610	6,830
c) Sport Fishing	millions of pounds (millions of kilograms)		5.08 (2.30)	6.32 (2.87)	5.76 (2.61)	3.64 (1.65)	20.8 (9.44)
	% cold water						
	% cool/warm water						
	000's recreation opportunities		5,740	7,600	5,220	5,600	24,160
PROVINCIAL PARKS		1980					
a) Protection/Heritage Appreciation							
Natural Environment	No. site districts represented		3	1	5	4	13
Waterway	No. site districts represented		2	-	-	1	3
Wilderness	No. site regions represented		1 (zone)	-	-	-	1 (zone)
Historic	No. parks		1	-	-	-	1
Nature Reserve	No. parks		1	3	-	3	7
Recreation	No. parks		8	15	8	12	43
b) Recreation/Tourism		1976					
Day Use							
Swimming	000's of opportunities		590	1,844	3,151	2,898	8,483
Picnicking	000's of opportunities		185	1,050	1,605	2,214	5,054
Extended Use							
Camping	000's of opportunities		989	690	1,286	1,113	4,078
Back Country	000's of opportunities		322	-	-	-	322

SUMMARY OF TARGETS BY ADMINISTRATIVE REGION

Target Date	Algonquin Region	Central Region	Eastern Region	South-western Region	Southern Ontario Total	Target Increase - Percent	
						During Planning Period	Per Annum
2020	104.4 (2.96)	26.0 (0.74)	50.0 (1.42)	29.0 (0.82)	209.4 (5.93)		
2025	291 (264)	4,700 (4,264)	1,072 (972)	1,480 (1,343)	7,543 (6,843)		
2000	145	126	180	200	650		
2000	389 1	442 -	311 4	447 6	1,589 11		
2000	128 1	179 1	273 5	223 21	803 28		
2000	280	65	80	50	475		
2000	245	1,525	185	570	2,525		
1999	0.39 (0.18)	0.86 (0.39)	1.78 (0.81)	28.95 (13.13)	31.99 (14.51)		
1999	284	3,610	310	2,610	6,830		
1999	5.21 (2.36)	6.48 (2.94)	5.93 (2.64)	3.73 (1.69)	21.32 (9.67)		
	14	15	3	9	11		
	86	85	97	91	89		
	7,175	9,500	6,525	7,000	30,200		
no date							
	5	7	7	7	26		
	6	6	6	8	26		
	1	-	*	*	1 (plus 2 zones)		
	unknown	unknown	unknown	unknown	unknown		
	unknown	unknown	unknown	unknown	unknown		
	n/a	n/a	n/a	n/a	n/a		
2001	817 236	4,037 2,652	3,821 1,965	3,729 2,722	12,404 7,575		
	1,257 446	1,160 -	1,521 2	1,674 -	5,612 448		

* representation will be achieved by a wilderness zone in another class of park.

Blue Racer	(<i>Coluber constrictor foxi</i>)
Timber Rattlesnake	(<i>Crotalus horridus horridus</i>)
Peregrine Falcon	(<i>Falco peregrinus anatum</i>)
Bald Eagle	(<i>Haliaeetus leucocephalus alascanus</i>)
West Virginia White Butterfly	(<i>Pieris virginiensis</i>)
Lake Erie Island Water Snake	(<i>Natrix sipedon insularum</i>)
Piping Plover	(<i>Charadrius melodus</i>)
Eskimo Curlew	(<i>Numenius borealis</i>)
Golden Eagle	(<i>Aquila chrysaetos</i>)
White Pelican	(<i>Pelecanus erythrorhynchos</i>)
Eastern Cougar	(<i>Felis concolor couguar</i>)
Small White Lady's Slipper	(<i>Cypripedium candidum</i>)
Kirtland's Warbler	(<i>Dendroica kirtlandii</i>)

¹As designated by regulations of *The Endangered Species Act*.

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GLOSSARY

Crown Land/Public Land	- all land (including land under water) held by the province: both land which has never been sold and land which has been re-acquired. In this report, public land and Crown land are used synonymously.
Goal	- a general purpose to which the ministry aspires
Objective	- a quantifiable end result to be achieved
Occasion	- a measure of recreational use describing the number of times a recreation resource or facility is used by individuals in a given time period. An occasion is considered not to exceed one day in duration.*
Opportunity	- a measure of recreation supply describing the number of times a recreation resource or facility can be used (occasions of use) in a given time period. An opportunity is considered not to be greater than one day.*
Policy	- a decision concerning the objectives to be achieved
Site District	- a fairly large sub-division of a site region set apart from other areas because of a characteristic pattern of landform features. There are 26 site districts in southern Ontario (map 5).
Site Region	- an area of land within which the response of vegetation to the features of landform follows a consistent pattern. Three of Ontario's 13 site regions are found in southern Ontario (map 5).
Strategy	- planned actions or measures to achieve a desired end
Target	- a quantified end to be achieved or completed by a specific date

* The terms occasion and opportunity have replaced "user day"; a term which was formally used as a measure of both supply and use.

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